CHAPTER 1. INTRODUCTION

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This report is one of three disciplinary reports on the African Burial Ground Project. One report focuses on the skeletal biological analysis of the remains recovered from the site (Blakey and Rankin Hill 2004). A second report focuses on the documentary history, from a Diasporic perspective, of Africans who lived and died in early New York (Medford 2004). The present report, consisting of four volumes, presents the archaeological research on the African Burial Ground. General background on the African Burial Ground project is presented in the beginning of the skeletal biology component report (Blakey and Rankin-Hill 2004). Here we provide background information that is specifically relevant to the excavated site, the archaeological fieldwork undertaken in 1991-92 (its planning, personnel, extent, duration, termination, etc.), and the analysis and disposition of non-skeletal material from the excavation.¹

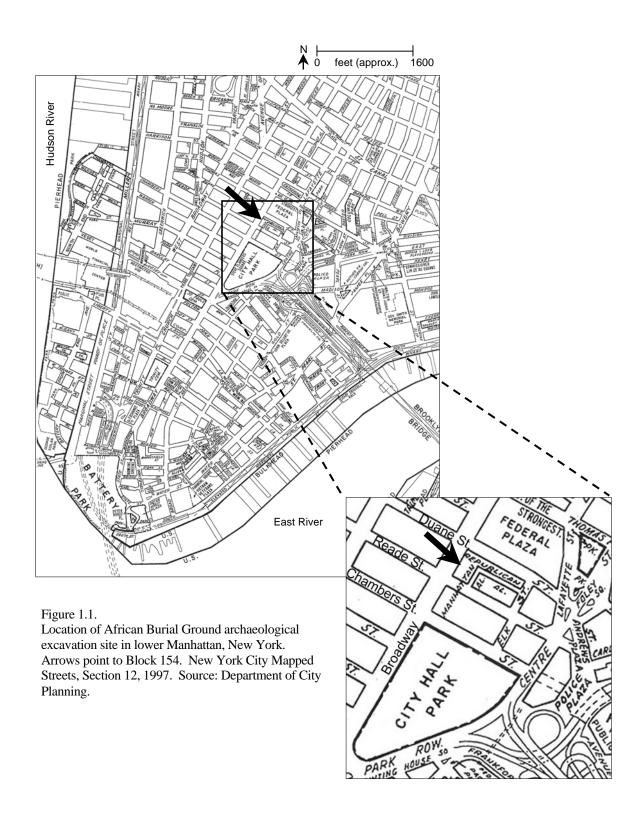
First, we review briefly the history of the project (from a regulatory standpoint), list the questions posed in the research design for archaeology, and explain the organization of this report. The subsequent sections provide a description of fieldwork, with a summary of burials recovered, and a discussion of laboratory procedures and methods. The impact of the September 11, 2001 attack on World Trade Center (where the archaeological laboratory was housed) and the decision-making and logistical efforts that went into the reburial of archaeological collections in October 2003 are described.

1.A. Project background and organization of the report

The site, the Section 106 process, and the Memoranda of Agreement

The African Burial Ground is located in lower Manhattan, New York City and County. The portion of the cemetery that has been investigated archaeologically is located on Block 154, which is bounded on the north by Duane Street, on the south by Reade Street, on the west by Broadway, and on the east by Elk Street (Figure 1.1). It lay within the proposed construction site for the 290 Broadway Federal Office Building, part of the Foley Square Project of the General Services Administration (GSA). During the planning process for the construction undertaking, GSA addressed a series of environmental regulatory issues, and retained the services of an engineering firm, Edwards and Kelcey Engineers, to prepare an Environmental Impact Statement. Among the tasks performed under that contract was archaeological research, pursuant to the

¹ The site included historic archaeological components that were not related to the cemetery. A separate report on the history, archaeological excavation, and analysis of these components is in preparation by John Milner Associates for the General Services Administration (Cheek 2003).



instructions and intents set forth by Section 106 of the National Historic Preservation Act and the National Environmental Policy Act. The firm hired a cultural resources subconsultant, Historic Conservation and Interpretation (HCI), in 1989, and HCI prepared a "Stage 1A" documentary study in order to determine the potential for archaeological resources within the Foley Square project areas, including Block 154 (Ingle et al. 1989).²

That background study, which was incorporated into the Foley Square Project Draft Environmental Impact Statement, indicated the possible presence of remains associated with the African Burial Ground within the project's footprint, and recommended a limited program of archaeological testing. In brief, while much of the block was thought to have been thoroughly disturbed by several phases of building construction, three areas were thought to have been left undisturbed or minimally disturbed: the alignment of Republican Alley (an alley that had been laid out in the late 18th century and never built upon), former Lot 12, and portions of former Lots 20/20½/21 (Figure 1.2). These three areas were targeted for archaeological testing. Even though preservation potential was considered fairly low, it was argued that any extant remains of the cemetery would be highly significant and eligible for the National Register.

A Memorandum of Agreement (MOA) was signed by the Advisory Council on Historic Preservation and GSA in March of 1989. The MOA stipulated that archaeological investigations would be conducted at the project area in accordance with a research design (to be prepared by GSA with consultation) that would establish categories of historic significance; that if archaeological materials were found they would be evaluated and treated in accordance with the *Secretary of the Interior's Standards and Guidelines for Archaeological Documentation* (48 FR 44734-37) and the *Section 110 Guidelines*, in conformance with the research design and for purposes of Section 106 compliance; that such features and materials would be considered eligible for the National Register of Historic Places; and that GSA, with consultation, would determine appropriate levels of mitigation.

Though the MOA was in place, archaeological fieldwork failed to proceed within the usual phased framework, in which testing designed to determine the extent and integrity of resources would have been followed by evaluation and consultation on mitigation or avoidance. The full horizontal and vertical extent of the intact graves was never determined in a "testing" phase. Rather, when archaeological testing conducted by GSA's consultant HCI and Interpretation beginning in May of 1991 revealed the presence of intact burials at the rear of Lot 12, GSA adopted full archaeological excavation as the mitigation strategy. At first, it was assumed that only a small area would contain intact graves, but ultimately graves were found to extend from the former north-south leg of Republican Alley to the eastern extent of the project site. The initial documentary

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² A second component of the Foley Square Project was the new Federal Courthouse, located on Block 160 several blocks east of the 290 Broadway site. The Courthouse archaeological investigation resulted in excavation of the Five Points Site (Yamin 2000).

³ Other potential resources identified in the "IA" report included remains associated with 18th-century potteries and with residential development dating to the end of the 18th and early 19th centuries. Subsequent archaeological research on the non-burial components of the 290 Broadway site is detailed in a separate report (Cheek 2003).

DUANE STREET

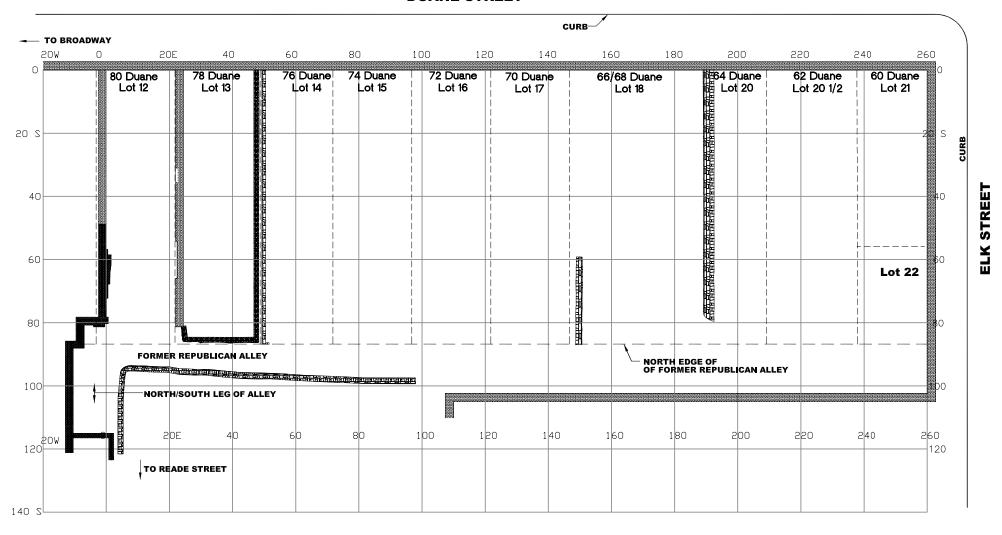




Figure 1.2 Plan Of Archaeological Excavation Area Showing Former Poperty Lines And Alley In Relation To Streets Prepared for: The United States General Services Administration

research, as well as analysis of subsequent test borings, had failed to adequately determine the full depth of fill – as much as 25 feet in the eastern area at Elk Street – covering the original site. This fill had protected hundreds of graves, and the discovery of this level of preservation came as a surprise.

Mitigation through full data recovery continued to be pursued up until July of 1992, when, in the face of mounting public pressure, the field excavations were shut down by GSA. In the meantime, an amendment to the MOA was signed in December of 1991 by the Advisory Council, the New York City Landmarks Preservation Commission (LPC) and GSA. This amendment stipulated, in part: preparation of a Research Design by GSA's consultant, HCI; that burial excavations would continue once field safety issues were addressed; that GSA, in consultation with the Council, LPC, and Interested Parties, would determine the appropriate level of analysis of the human remains; that GSA, in consultation with Interested Parties and the City of New York, would ensure the respectful and dignified treatment of all human remains recovered; that human remains would be reburied; and that GSA would commemorate the cemetery with a memorial, develop exhibit space in 290 Broadway, and produce a video documentary on the project. The General Services Administration remained, and still remains, the agency responsible for compliance with Section 106 and implementation of the MOA as amended.

Ultimately, the field excavations were halted prior to the preparation of an acceptable research design – partly because of the lack of such a document – at the end of July, 1992 (for background on the political struggles surrounding the burial excavations, see Chapter One of the Skeketal Biology Report [Blakey 2004]). By that time, HCI had been replaced as GSA's archaeological consultant by John Milner Associates (July 1, 1992), and biocultural anthropologist Dr. Michael Blakey, then of Howard University and currently of the College of William and Mary, had consulted at the site and participated in GSA's public meetings. Portions of the project site had had all burials removed, while in others graves were either known still to be in place or were presumed to be (see Chapter 3 below for a discussion of site conditions before, during and after the project). The footprint of the 34-story office tower had been completely excavated, while the "Pavilion" area, the proposed site of a smaller structure, had not. Thus, due to the timing of the cessation of excavation, construction of the main tower building could proceed.

Research design

In late 1992 Blakey was appointed Scientific Director of the African Burial Ground Project and in 1993 Howard University received a contract to conduct the post-excavation research. A research design prepared by Howard University and John Milner Associates (JMA) was accepted by GSA, after comments had been received from consulting agencies (the Landmarks Preservation Commission and the Advisory Council on Historic Preservation), in the spring of that year. This document covered both the African Burial Ground and the non-Burial Ground components of the 290 Broadway project site. It stated that the African Burial Ground meets two of the Evaluation Criteria for inclusion on the National Register of Historic Places: Criterion "a" (association with the broad patterns of our history) and Criterion "d" (having the potential to yield

important information about the past) -- and indeed, the site was designated a National Historic Landmark in April 1993 (see Howson and Harris 1992, reproduced in Appendix A). A finding of "No Adverse Effect" was not possible even with full archaeological data recovery, since both Critera "a" and "d" were cited. Partial mitigation of the adverse effects of the construction of 290 Broadway was to include programs of data analysis, curation, and education.

The research design listed numerous research questions to be addressed in the data recovery program. It specified the following for the non-skeletal archaeological analysis (pp. 41-47):⁴

- What spatial variation can be seen in burial types in the African Burial Ground and what cultural explanations can be offered for this variation?
- What taphonomic forces have acted upon the cemetery and how have they affected the skeletal data base?
- What can be learned about the distribution of different types of coffins, coffin size differences, coffin decoration, and coffin manufacturing techniques?
- What cultural and temporal information can be obtained from the study and analysis of artifacts found in grave pits and in coffin fills?

These questions and many others are addressed in subsequent chapters of this report. In addition to goals of the research design, however, the project team has had a complementary agenda that emerged from the process of public engagement. Four topics of overarching concern to the community were identified during this process: 1) The cultural background and origins of the burial population; 2) the cultural and biological transformations from African to African-American identities; 3) the quality of life brought about by enslavement in the Americas; and 4) the modes of resistance to enslavement. Our archaeological analyses ultimately are designed to provide information relevant to these issues. They are addressed as appropriate throughout this report as described in the following section.

Report organization

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Our approach begins with due attention to and respect for the individual graves that archaeologists excavated during 1991 and 1992. There were no mass graves at the African Burial Ground, and few were shared by more than one person. The "making of the African Burial Ground" involved funeral after funeral, carried out for individuals by their survivors one by one, week after week, year in and year out. In keeping with the Howard University team's respect for the gravity of excavating such a cemetery archaeologically, the disinterment of each individual grave at the cemetery is described in Volumes 2 and 3 of this report. By providing basic information on how each burial was found, what the grave contained, the condition of the remains, the age and sex of the

⁴ Beyond posing these questions, the bulk of the research design for archaeology described field methods (after the fact) and outlined methods for specific materials analysis. It should be noted that none of the authors of the current report participated in the preparation of the Research Design.

individual, and whether and how it overlapped with other graves, a partial and admittedly inadequate reconstruction of the original interment is made possible.

Volume 1 is organized as follows. The remainder of *Chapter 1* describes the fieldwork (including a list of burials excavated) and laboratory methods, the impact of the destruction of the World Trade Center on September 11, 2001, and the reburial of archaeological materials. *Chapter 2* provides historical background and context. It comprises two parts: first, a document-based chronological history of the burial ground (including its origin, the development of its surrounds, and its closing); and second, a comparison of documentary evidence about African funeral practices in New York and in the African Diaspora. In *Chapter 3* we describe the archaeological site as such, including the original landform, post-cemetery development of the parcel, the condition of the graves, and the limits of excavation. Next, *Chapter 4* presents our methodology for arriving at temporal groupings of the graves that were excavated at the site, from early to late. Before turning to each temporal group, *Chapter 5* presents an overview of the mortuary population, burial practices, and spatial arrangement of the African Burial Ground, as observed through the archaeological investigation. Attention is paid to the use of coffins, grave orientation, body position, co-interment, shrouding and clothing the dead, and the presence of personal adornment and other items in association with the dead. Chapters 6 through 9 cover the chronological groupings of burials, providing overviews of the town of New York, population figures, and discussions of the material culture and spatial arrangement of burials. Selected unique and unusual graves from each group are described. Chapters 10 through 14 deal with specific categories of mortuary material culture: coffins, pins and shrouding, clothing, adornment, and other burial items. Throughout the chapters, we address interpretive themes of social identity, enslavement and resistance to bondage, mortuary practice and spiritual and cultural agency, and the role of the African Burial Ground in creating and sustaining a community. *Chapter 15* provides a conclusion. All appendices are in Volume 4.

1.B. Archaeological fieldwork

Archaeological testing commenced in May 1991in Lot 12 (Figure 1.2). A backhoe was used to excavate test trenches within the front portion of the lot and within the former footprint of Republican Alley, where African Burial Ground graves were considered most likely to have survived. Human remains, which subsequently were determined likely to be from the eastern half of Burial 1 and from other disturbed burials in the area, were discovered during excavation of "Trench D" within Republican Alley in June. At that time machine excavation of the immediately surrounding area was halted until GSA decided to proceed with hand excavation of burials and arrangements for appropriate site preparation, including the shoring of the excavation perimeter and construction of an access ramp, could be made. Subsequently, fieldwork proceeded with a combination of machine-aided clearing and hand excavation, and shelters were constructed to protect the exposed graves and the excavators, and these temporary structures were heated and lighted once fieldwork progressed into the winter months (Figures 1.2 through 1.5). As each successive shelter was constructed (they were progressively more substantial), it



Figure 1.3. Backhoe clearing adjacent to temporary archaeological excavation shelter early in the fieldwork. Photograph by Dennis Seckler.



Figure 1.4. Excavation shelter erected to allow night and winter work. Photograph by Dennis Seckler.



Figure 1.5. Archaeologists working under lights. Teams of two worked on each burial excavation, and the density of the graves made for close quarters inside the shelters. Photograph by Dennis Seckler.



Figure 1.6.
Construction of the 290 Broadway Federal building proceeded during the archaeological fieldwork. The archaeological excavation shelter is visible at the rear. The view is toward the southeast.
Photograph by Dennis Seckler.

was designated with a letter from "Structure A" to "Structure G" (hence many of the field records including artifact bag labels included a structure letter).

HCI conducted the field excavations through the end of June 1992, when JMA assumed the project as GSA's new archaeology consultant. Most of the burial ground field staff was retained, including Site Director Michael Parrington. Excavation personnel are listed in the acknowledgements.

No member of the Howard University archaeology team participated in the fieldwork at the site, although members of the skeletal biology staff did so for brief periods. The lack of continuity of personnel between the fieldwork and analytical phases of research is common in public archaeology, and can result in loss of information. Every effort has been made to minimize such loss in the current project. Procedures followed for excavation of burials have been reconstructed from records kept by HCI and JMA, with the aid of the description contained in the 1992 Research Design. In addition, we consulted with various members of the field staff regarding methods, both during the period when our staffs overlapped at the laboratory, and later during the preparation of this report.

Procedures

Survey and mapping

A site grid was established aligned with the street grid and property lines. The north-south base line (0' East) was the west edge of Lot 12, along the interior (east) side of an extant concrete wall. The east-west base line (0' South) was located where the north-south line intersected the front edge of Lot 12, along Duane Street. Drawings and maps were plotted with reference to east and south coordinates on this grid, and all horizontal measurements were taken in feet and tenths of feet.

A site datum designated "A" was established with an elevation measured at 27.50 feet above mean sea level (Sandy Hook). A series of sub-datum points was used throughout the excavations. Grid coordinates were recorded for some, and for each the depth below the site datum was recorded (Appendix B). All depths recorded in the field for burial features were taken from these sub-datum points, and therefore can be converted readily to absolute elevations relative to sea level. Vertical measurements in the field were taken in feet, tenths, and hundredths. Depths recorded on the field drawings and forms simply needed to be subtracted from the elevations of the datum points listed for each burial. All elevations referred to in this report are absolute elevations, not excavation depths.

Clearing

Clearing of the massive amounts of fill and building material overlying the graves was accomplished by machine (excavators and backhoes). In some areas this task resulted in damage to graves, discussed in Chapter 3 below. Once overburden was removed to a level believed to be just above burials, or once burial outlines or tops of coffins were

exposed, hand clearing commenced. In some areas, historic features post-dating the burial ground were encountered prior to graves, and were excavated first or in conjunction with adjacent burials (see the report on the 290 Broadway non-burial site component in Cheek 2003). The need to construct excavation shelters and shoring facilities, safety issues, and of course the construction activity for 290 Broadway that was carried on simultaneously with the archaeological fieldwork, complicated the excavation strategy. Building construction access ramps, perimeter walls, and underpinning for adjacent 22 Reade Street caused delays and damage during clearing of burial ground areas. As each shelter was built, or in some cases when it was dismantled, graves located beneath its sills had to be identified and excavated.

In general, the site was cleared for archaeological excavation from west to east, beginning with the rear of Lot 12 and the north-south leg of Republican Alley. As the months of fieldwork progressed, GSA identified a "Critical Area" for priority excavation, that being the footprint of the tower building. This area was cleared more speedily by machine than the westernmost area had been, in order to provide quicker access for the archaeological team. There is no question that site clearing was accomplished under less than optimal standards from the point of view of archaeological investigation. The pressure to move forward with building construction forced compromises with the scientific program, such that historic features above the level of the graves were often stripped, and the opportunity to examine the site carefully for remnants of the original ground surface was lost. It is probably no accident that the only portion of the site for which an extant 18th-century cemetery surface was identified was the first area excavated, the north-south leg of Republican Alley. Here, the upper few feet of fill were mechanically removed, but lower layers of fill were excavated by hand with shovels.

In parts of the site (Lot 12; the westernmost section of Republican Alley; Lots 201/2 and 22), numbered Excavation Units (5- or 10-foot squares) were opened. When excavation of these units revealed burial outlines, the burial excavation proceeded separately from the rest of the unit. Non-burial excavation units are described in a separate report (Cheek 2003).

Burial identification and numbering

When a presumed burial was discovered or soon after, it was given a number. Burial numbering was consecutive. All records and objects related to the burial used this number, including recordation forms, artifact boxes and bags, and wrapped skeletal remains. A total of 435 burial numbers were assigned during the fieldwork at the African Burial Ground, but there were not this many actual interments. Some of the contexts referred to by these numbers subsequently were determined not to be burials, or were determined to be parts of other burials. Also, some of the burials excavated contained no surviving human remains. This was due either to complete decay or, as appears to be the case for at least two graves, the coffin was placed in the ground empty or remains were removed in the past. Table 1.1 summarizes the cases with no human remains. The total number of graves identified was 424, and the total number of individuals for whom any skeletal remains could be inventoried numbered 419. All burials that could be identified

as such, whether or not human remains had survived, were included in the archaeological analysis to the extent possible (e.g., they were considered in the stratigraphic, spatial, and chronological analyses, and in the distributions of artifacts where such survived). In a few interments, Burials 301, 329, 391, and 420, skeletal analysis revealed the presence of remains from more than one individual within a burial context.

Table 1.1. Assigned burial numbers with no discrete human remains associated						
Burial Number	Explanation					
62	Remains were determined to be from Burial 76.					
74	No remains extant (empty child coffin?).					
92	Remains were determined to be from Burial 96.					
129	No remains extant (burial with empty coffin - adult size, hexagonal).					
139	Soil stain was determined not to be a burial.					
140	Soil stain was determined not to be a burial.					
141	Soil stain was determined not to be a burial.					
145	No remains extant (burial with empty coffin - adult size, hexagonal).					
206	No remains extant (infant coffin).					
220	No remains extant (infant coffin).					
231	No remains extant (infant coffin).					
232	No remains extant (infant coffin).					
233	No remains extant (infant coffin).					
261	No remains extant (adult coffin, disturbed).					
269	Remains were determined to be from Burial 293.					
296	No remains extant (infant coffin) (a tooth bud was later found in the laboratory).					
359	No remains extant (partial coffin).					
360	No remains extant.					
378	Burial left in place in 1992.					
381	Burial left in place in 1992.					
401	Coffin remains only, determined to be from Burial 352.					
407	Determined not to be a burial.					
409	Determined not to be a burial.					
411	Soil stain was determined not to be a burial.					
421	Soil stain was determined not to be a burial.					
422	Possible coffin remains only, no human bone.					
423	Grave with coffin identified but no human remains exposed <i>in situ</i> , left in place in 1992.					
426	Grave with coffin identified but no human remains exposed, left in place in 1992.					
429	Grave with coffin identified but no human remains exposed, left in place in 1992.					
430	Grave with coffin identified but no human remains exposed, left in place in 1992.					
433	Burial left in place in 1992.					
434	Burial left in place in 1992.					
435	Burial left in place in 1992.					

Basic burial data is contained in Appendix C. A list of the excavated burials is provided in Table 1.2, located at the end of this chapter, which should be used along with Figure 1.7 (the Site Plan, located at rear of this volume); a full description of the disinterment of each burial will be found in Volumes 2 and 3.⁵

In addition to the burial number, a Catalog Number was assigned during field excavation. The catalog number is also a consecutive number that in theory provides a way to differentiate specific field contexts, such as stratigraphic levels, from one another. However, at the African Burial Ground only one catalog number was used for each burial, so that the material from the grave shaft fill, coffin remains, material from within the coffin, skeletal remains, and all samples taken had the same number. The only possible record, then, of where within a burial context any given item or sample came from might be the label on the bag or box used in the field to collect the material, or on field drawings that depicted specific items that were then bagged or boxed separately with specific labeling. Usually the information retained on containers was sufficient to determine which materials were from the grave shaft, which from within the coffin, etc., but there was no way to efficiently track these proveniences in a database when first brought to the lab, nor were all containers sufficiently labeled for us to determine exactly where items or samples were collected. For instance, since all nail bags had the same number for any given burial, we could not distinguish coffin nails from any "extra" nails found in the grave or shaft. Likewise, if shell was found in the grave shaft and also on or in a coffin, we could not readily determine which shells were from which location. Since grave shafts were excavated as single units with just one catalog number, there was no way to determine whether diagnostic artifacts were from the upper part of the shaft, alongside the coffin, or beneath the coffin.

Excavation of burials

Where visible, grave shafts were delineated on the ground and then excavated in full in a single layer until a coffin lid or bones were encountered. The grave shaft fill soils were screened through ¼-inch wire mesh, and notes indicate that sometimes the soil was water-screened (there is no general record of which burials were wet screened or how they were selected). Typically, a team of two excavators worked on each burial through to completion, though in some cases teams were switched in the course of a burial or extra excavators were recruited. When a coffin lid or evidence of a wood coffin outline was encountered, elevations were taken, and sometimes it was drawn and/or photographed (see description of recording below). Where feasible, wood samples were taken (though in many cases, the only recoverable "wood" samples consisted of wood-stained soil). Excavators endeavored to leave coffin sides and all coffin nails in place during the excavation of the skeletal remains. Additional wood samples were taken from the sides and finally the bottoms of coffins where feasible.

⁵ The site maps used in this report include the 19th-20th century lot lines and numbers for Block 154. The individual lots were identified in the Stage 1 research in order to trace development of the block over time; the lots were subsumed within a larger tax parcel at the time the project commenced. The former lot boundaries are useful, however, for understanding the excavation strategy and differential preservation, and for locating archaeological site areas.

Usually skeletal remains were visible at the same level as coffin lid remains. One excavator began working to expose the cranium while the second began trying to locate the femurs. Once the general disposition of the remains was established, the standard order of excavation was legs and arms, chest, hands and feet, and finally the facial and pelvic areas. Soil from among the bones was screened for artifacts, though normally artifacts were identified during excavation of the bones and left in place until they could be recorded *in situ* along with the skeleton.

Field assessments were conducted by the Metropolitan Forensic Anthropology Team (MFAT), a team of physical anthropologists based at Lehman College hired by GSA's consulting archaeologists. Assessments included condition of remains as well as preliminary evaluations of age, sex, and pathologies. Once each burial was fully exposed, one of the MFAT specialists performed an assessment of the physical remains. In some cases the MFAT team members assisted with excavations as well. MFAT personnel are listed in the acknowledgements.

All bones were left in place for recordation, then were removed individually and wrapped (at first using newspaper, but in July of 1992 acid-free paper was adopted by the JMA field team) and packed in boxes. Once the skeletal remains were removed, the remaining grave shaft fill was excavated and screened. All human remains were brought directly from the site to Lehman College laboratories in the Bronx for storage. Artifacts found with burials in direct association with skeletal remains (i.e., all except coffin remains and grave shaft fill contents) were packed in bags or small containers and sent to the project conservators (see below). Shaft fill artifacts and coffin remains (nails and wood) were bagged and sent to the HCI laboratory facility (until July 1992) or to a storage space provided by GSA.

Soil samples were taken from the grave shaft fill soil (as a "control" sample), the coffin lid area, the stomach area, the thoracic area, the pelvic area, and the sacrum. Not all of these samples were taken from all burials. Thoracic samples were added to the field protocol in late May of 1992. The control samples were taken so that 1) soils could be tested for plant remains, providing information on the historic landscape, and 2) to obtain pH levels and observe any insect remains in the soil, as aids to understanding bone condition. The other samples were taken so that macro-botanical, palynology, and parasitology analyses could be conducted to provide potential information about the diet and health of the deceased and about plants that might have been used in mortuary practices.

Specific locations of control samples were generally not recorded, and it is often not known for individual burials whether these were taken from above, below, or alongside the coffin or skeleton, although the date of the sample, if recorded, can inform us as to

⁶ Neither testing of pH levels nor insect identification was undertaken. Chemical analysis was deemed unfeasible because too much time had passed from initial collection to the time subcontracting was under way. Insect remains were not identified in the soil analysis conducted thus far, but their study through future analysis of retained light fractions may be possible if specific questions about decomposition need to be addressed (none were posed by the current research team).

whether it was taken before or after the skeleton was exposed and recorded. When cataloging samples, bag labels (which were somewhat inconsistent) provided the only information on sample locations. Samples were sent from the field site to HCI or JMA laboratory facilities for storage.

Certain in-field conservation procedures were designed to minimize damage to human bone and artifacts that occurred once they were exposed to the air. Very fragile bones, including frequently those of infants and young children, were "pedestalled" during excavation, i.e. soil surrounding them was left in place and removed as a block. If soil showed signs of bacteria microbes, a mild biocide (70% ethanol) was applied to the pedestal. In a few cases a consolidant, a polyvinyl acetate (PVA) emulsion was used as a consolidant for long bones. In some instances, field notes indicate that wet paper towels were placed on skeletal remains to keep them moist during excavation and recording of the burial, but it is not known whether this was standard procedure. Artifacts that were particularly fragile were frozen along with surrounding soil. Plastic was first placed over the bone, then dry ice was applied to the artifact and the block, when frozen, was lifted out and transported to freezers in the laboratory facility. There is no list of items for which dry ice was used, though some cases are described in the field records for individual burials and are noted in the descriptions in Volumes 2 and 3 of this report.

Fieldwork was halted on July 29, 1992, and GSA decided to preserve remaining graves at the project site rather than excavate further. However, at that time sixteen burials had been identified in the ground but not removed, some of which had the skeletal remains partially exposed. These burials were covered with vermiculite and soil pending GSA's decisions, in consultation with the project archaeologists, as to whether they would be removed or left in place. Excavation of eleven partially exposed burials was resumed in September 1992, and their skeletal remains were removed for analysis.

Field recording

As at any archaeological site, field recording varied with the individual excavators. At the African Burial Ground, there was also an evolution in recordation standards: the first burials recovered were not always drawn adequately, for example, and field forms specifically designed for burial removal were adopted part way through the project. On the other hand, later in the field project some burials had only the minimum data recorded on the site forms, with no additional notes.

Each burial was recorded on its own forms and drawings, and individual drawings were then transferred to site maps. The maps were sometimes, but not always, clear as to superposition of burials. Usually the stratigraphic relationships among groups of overlapping burials were not mentioned in the excavators' notes, which focused on the individual burial. There are no extant field notes taken by the archaeologists who supervised burial excavations, which might have discussed overall site stratigraphy. Soil descriptions were sometimes, but not always, provided on field forms, but the grave shaft fill soil was not differentiated from the coffin in-fill and the surrounding soil matrix is rarely described.

Forms

Forms were completed for every burial excavated, but several different forms were adopted over the course of the project. Examples of forms used by HCI, JMA, and MFAT are provided in Appendix D. The field forms are retained in the project archive; HCI and JMA forms also were transcribed into a database and are available in the digital archive. Up until mid-April of 1992, each burial was recorded on both a "Provenience Sheet" and a "Burial Form". The Provenience Sheet also provided a grid for a sketch, and in many cases the excavators produced here a rough sketch of the grave outline, the coffin top, or even the skeletal remains. A "Burial Checklist" was added in April of 1992. This form listed all possible samples and whether they were taken, and included specific information on how associated artifacts were stored. Unfortunately, the "Provenience Sheet" was discontinued, and while most information was contained on other forms, some items were no longer recorded, including soil descriptions and opening sketches.

MFAT field assessment forms provided an overall descriptive assessment of the condition and position of remains, as well as listing individual skeletal elements with presence/absence and condition. These forms also included preliminary sex, age, "race," and pathology assessments.

Drawings

A scaled plan drawing was made for each burial *in situ*, after skeletal remains had been exposed and cleaned, prior to removal (see Volumes 2 and 3 for drawings). Early in the fieldwork, each excavator prepared his or her own burial plan drawings. Subsequently, crew members with particular ability were assigned work as field artists with responsibility for the *in situ* drawings. One artist/archaeologist in particular, Ms. Margo Schur (now Margo Meyer of the Anthropological Studies Center at Sonoma State University), executed drawings of exceptional quality and detail. In addition to the final burial drawings, in some cases opening sketches or detail sketches were drawn by excavators, most often on the field forms as noted above. Occasionally schematic drawings of coffins were executed. Field drawings were at a scale of 1 inch to 1 foot (with only a few exceptions).

For most burial drawings, individual skeletal elements and other items (coffin remains, artifacts in some cases) were plotted vertically as well as horizontally. As noted above, vertical measurements were taken from a series of site sub-datum points, and were in hundredths of feet. Depths below datum for skeletal remains were typically taken at the cranium, shoulders, elbows, innominates (hipbones), sacrum, knees, ankles, feet, and central vertebrae. Vertical measurements also were taken typically for the top and bottom of the coffin (either wood remains or nails) and for some artifacts found with skeletal remains. The complete list of field drawings is included in the project database.

As noted, individual burial drawings were traced onto larger site maps, also at a scale of 1 inch to 1 foot. In the western part of the cemetery skeletal drawings were traced, but later in the excavation (i.e. further east) only grave-shaft and coffin outlines were traced onto the maps. The earliest of these maps also show depths below datum points and give descriptions of soils intervening between graves, but most do not. A problem with the site maps is the difficulty in resolving issues of superposition: it is not always possible to tell which burial underlay which when more than one interment overlapped. In some parts of the site, maps were made of broad areas prior to excavation of graves, showing suspected grave shaft outlines, surrounding soil, coffin stains where visible. These are useful for reconstructing some of the soil descriptions for burials and for checking burial relationships. Unfortunately, the text on the surviving copies of these maps is mostly illegible (see section 1.D below).

Photographs

Field photographs were taken of each burial, *in situ*, at the African Burial Ground. Redundant sets of 35-mm slides and black-and-white negatives were produced. Each photograph has a menu board with the burial number and date, a trowel pointing to grid north, and a range pole marked in feet. In some cases, detail photographs were also taken of particular artifacts or skeletal elements *in situ*. The complete list of field photographs is included in the project database. Photographs were retained in the archaeological laboratory (see below) and used for site analysis.

1.C. Laboratory processing and analysis

A laboratory facility for non-skeletal material was provided by GSA at the World Trade Center in September of 1992, following the close of fieldwork. Prior to that, artifacts from the burials had been stored at HCI's facility in New Jersey, with the exception of items that were found in direct association with skeletal remains, including pins, buttons, beads, textile fragments, jewelry and other metal objects. These had been sent to the South Street Seaport's laboratory in lower Manhattan. Conservator Gary McGowan of that museum conducted initial conservation where necessary; he later became JMA's laboratory director at the World Trade Center. Material stored at the Seaport and the HCI facility was brought to the new laboratory in September of 1992.

The laboratory was staffed and directed by JMA, which was responsible, under the terms of its contract with GSA, for the processing of all collections from the Foley Square Project. When the Howard University Archaeology Team began work on the project in 1993, JMA continued to conduct the laboratory processing. Warren Perry of Central Connecticut State University was appointed Associate Director for Archaeology for the Howard team in 1996, and took over supervision of the processing along with Laboratory

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⁷ Collections from excavations at both of the Foley Square sites -- the Broadway block (Block 154, including burial and non-burial contexts) and the Courthouse block (Block 160, the Five Points Site) -- were processed and analyzed at the 6 World Trade Center facility. For the Five Points Site see Yamin 2000.

Director Leonard Bianchi. Jean Howson, a member of the research team, was added as a Co-Director of the laboratory in 1998.

The African Burial Ground archaeological analysis required different procedures and a separate database from those being developed for the rest of the Foley Square Project, which were of necessity more geared to the extremely artifact-rich Courthouse (Five Points) Site. The burial ground assemblage was relatively small in size, and artifact categories were completely different because of the mortuary context. For example, domestic artifact categories (e.g., "food preparation" or "health and hygiene"), along with the myriad functional, typological, and stylistic sub-categories used for a large domestic assemblage were irrelevant to the analysis of burials and burial-related artifacts. The burial ground procedures had to be designed to ensure that individual graves or components of graves could be distinguished from others, or grouped for various kinds of analysis; to ensure that everything from each grave could ultimately be reunited; and to ensure that only those items meant to accompany the deceased were re-interred with the remains. Moreover, we deliberately chose not to assign broad functional categories to artifacts, since we wished to remain open, and leave our assemblage open, to interpretation. Eventually, a number of the tasks originally assigned to JMA were transferred to Howard University, including completion of African Burial Ground artifact inventories and samples processing. Procedures were overhauled so that all collections made during the excavations, and all records associated with them, could be accurately tracked. An easily accessible database using a standard commercial application was deemed adequate for our tracking and data management needs, rather than the complex and proprietary database developed by a JMA sub-consultant for the Five Points site.

Procedures

Provenience controls

As noted, a single catalog number was used to label all material from any given burial, whether from the grave surface, shaft fill, coffin, or coffin interior, including all soil samples. This kind of lumping is highly unusual in archaeological practice. Since analysis and, importantly, eventual reburial required differentiation of all of these kinds of excavation contexts, a plan was developed by the Howard University Archaeology Team to assign numbers to all items and samples in the collection that would serve as indices to more precise provenience. The catalog numbers were retained, and extensions added as listed in Table 1.3. Our goal was to prevent further loss of provenience information as processing progressed.

The need for adequate provenience controls for the collection was related to the need for an adequate database with which to record collections information. With the catalog numbers assigned, it would be possible to track artifacts and samples for individual burials and to retrieve information on similar contexts for all burials. The database is described in a subsequent section.

Artifacts that were directly associated with skeletal remains were not physically labeled with provenience indicators. These items were slated for eventual reburial, and were not physically altered in any way other than to stabilize them. ⁸ JMA laboratory staff did label artifacts from grave shaft fill contexts, which were not expected to be reburied, except for kiln waste, kiln furniture, and items less than approximately one inch in size. Labels were written in black ink, and include the site number (6980), catalog number (without extension), and burial number. Items with and without labels are retained in polyethylene bags with full catalog numbers written on the bags, as are soil samples.

Table 1.3.						
	Explanation of catalog numbers					
Extension	Explanation					
-В	("Burial") This extension was used for the skeletal remains themselves and for all items believed to be in <i>direct</i> association with skeletal remains. Examples are pins, buttons, or beads.					
-CL	("Coffin Lid") This extension was given to items that were recorded as being on the coffin lid. Examples are tacks, pieces of shell.					
-СН	("Coffin Hardware") Designates iron nails, tacks and other hardware that clearly came from the coffin of the deceased. Discrete lots (bags) of nails were given consecutive letters, as in -CHA, -CHB, -CHC in order to retain all possible provenience information. The letters were assigned in order of the date on the bag.					
-CW	("Coffin Wood") This was used for wood samples or soil scrapings from wood stains that clearly came from the coffin of the deceased. Discrete lots (bags) of wood were given consecutive letters, as in -CWA, -CWB, -CWC in order to retain all possible provenience information. The letters were assigned in order of the date on the bag; individual bags sometimes indicated whether the sample was from the lid, sides, or bottom.					
-GF	("Grave Fill") This was used to designate material that was in the grave shaft fill soil, rather than in direct association with the skeletal remains or placed inside the coffin.					
-S	("Soil Sample") This was used for all soil samples from a burial. Discrete soil samples were given consecutive letters, as in -SA, -SB, -SC to reflect soil taken from different places within a burial. The letters were assigned in order of the date on the bag; individual bags typically indicated where the sample was from. Soil samples that were processed by flotation were in turn given an "L", "H", or "U" as well, to designate light fraction, heavy fraction, or unfloated sub-sample (thus -SAL, -SAH, -SAU).					

Cleaning, conservation and storage

Project conservators were Gary McGowan and Cheryl LaRoche of JMA. Conservation procedures for each category of material are described in appropriate artifact chapters below (Chapters 10, 11, 12, 13 and 14), and in a draft report prepared by JMA. Typically, conservators examined and cleaned only those items that were recovered from within coffins or in direct association with skeletal remains (these items came to be

⁸ The single exception was a silver pendant that was sampled to determine metallic content. See Chapter 13.

⁹ The report (LaRoche 2002) was made available for use by the Howard University team during our analysis.

referred to as "burial artifacts"), though they oversaw the processing of grave shaft and coffin materials as well. In addition, the conservators examined a selection of wood samples from coffins. Many of the wood samples (apparently the best ones from each burial) along with other organic samples were stored in freezers when first brought in from the field. The freezers and their contents were brought to the World Trade Center laboratory in September 1992.

"Burial artifacts" were placed in inert polyethylene boxes with inert packing and many were placed in display cases in the laboratory once stabilized. Items that were not on display were kept in metal storage cabinets.

Items from grave shaft fill contexts and coffin remains were cleaned, sorted and bagged by material (wood, glass, metal, ceramic, faunal), and placed in cardboard storage boxes. Bags were of polyethylene, and tyvek tags were placed in each bag indicating burial number and material. Ceramics, nails, and glass were washed in a weak non-ionic detergent solution and rinsed in plain water, then cleaned with a soft-bristle brush. For shell, adhering soil was soaked in a 50% ethanol solution and removed.

Inventory

All artifacts examined by the project conservators (i.e., those found in direct association with skeletal remains) were inventoried by them and entered into a conservation data table (this was ultimately converted to Microsoft Access and merged with the artifact inventory data table currently in use). Coffin hardware and material from grave shaft fill soils were identified and inventoried by Howard University laboratory staff under the direction of Leonard Bianchi. Bianchi also re-examined and further described artifacts that had been inventoried by the conservators. Animal bone from grave shaft contexts was examined and inventoried by JMA sub-consultant Marie Lorraine Pipes. All inventories are contained in Appendix E. Stoneware from grave shafts was further examined and sub-consultant Meta Janowitz made a more detailed inventory (Appendix F).

Unique artifacts that came from contexts in direct association with skeletal remains (typically those treated by conservators) were given consecutive arbitrary numbers ("point numbers") within each provenience which can be appended to the catalog number and allow reference to unique items. For example, individual unique artifacts from Burial 6 have the catalog numbers 219-B.001, 219-B.002, 219-B.003, etc. These numbers do not necessarily correspond to the numbers assigned by conservators, because the latter were given to groups of artifacts rather than individual items, and in many cases the archaeologists wished to further differentiate the items and describe them in greater particularity. (In some cases, groups of identical items still share a number). Whenever possible, burial artifact "point numbers" assigned in the field were used as the artifact numbers for the inventory.

¹⁰ Many boxes of wood samples were not frozen, and these consisted in large part of soil with wood fragments, probably scraped off as samples during excavation.

Soil samples

Many hundreds of soil samples were taken during field excavations, and three different teams were involved in analyzing them (Appendix G contains the methods and results of the various reports). Some of the samples from burial contexts were processed by William Sandy of HCI from December 1991 through July 1992 (a total of 428 samples). These samples were from coffin lids and interiors, stomach, and pelvic areas. A drum flotation device was used. Heavy and light fractions were sorted, and inventory and analysis was underway as of the end of June 1992, when HCI was replaced by JMA as GSA's consulting archaeological firm. Bone fragments recovered in heavy fractions were sent to the Lehman laboratory (those later determined to be animal bone rather than human were returned to the New York laboratory for faunal analysis). Artifacts from heavy fractions and bags containing the light fractions were stored at the World Trade Center laboratory along with the other collections from the excavation and were inventoried subsequently by Howard University laboratory staff. ¹¹

The hundreds of soil samples that were not floated by HCI, including all control samples, were stored at the World Trade Center laboratory. These were inventoried by Howard University Archaeology Team laboratory staff. Soil that had not been screened at all in the field was screened in the laboratory through ¼ mesh in order to recover artifacts and human bone. Human bone was sent to the skeletal biology team at Howard University, and artifacts were inventoried. Under the direction of the Howard University archaeologists, all as-yet unfloated soil samples were next divided into two parts, one for flotation and one to remain unfloated for other types of analysis. The "-U" (unfloated) portions were typically less than one liter in size. If a sample was too small to partition, it was retained unfloated. The inventory was updated to indicate the splitting of samples. JMA retained New South Associates to complete the flotation of all soil samples.

New South Associates was also retained for macrobotanic, palynology, and parasitology pilot studies. The samples used in the pilot studies were selected by Howard University's Project Scientific Director Blakey. No parasite data was preserved in any of the samples studied. However, both macrobotanical and pollen studies proved useful in identifying species of plants from coffin lid and pelvic contexts. The Howard University Archaeology Team decided to pursue both macrobotanical and pollen analyses for a larger sample of burials. Individual soil samples (some already floated) were selected by the Howard University Archaeology Team laboratory staff during the spring and summer of 2003. The samples were selected using several criteria, specifically site location, age and sex of the deceased, hypothesized period of interment, and confidence in the sample provenience. Our aim was to obtain an accurate sub-sample of the burial population along all of these parameters. Leslie Raymer of New South Associates performed the

¹¹ Sandy analyzed and inventoried 43 of the samples that he had floated (i.e. he "picked" or sorted and then identified botanical remains from the light fractions). This inventory was not salvaged after the collapse of the World Trade Center on September 11, 2001, and no copy is known to exist (Sandy, personal communication, 2003). The fractions selected subsequently by Howard University for analysis were therefore re-inventoried by New South Associates.

macrobotanical study, and Pat Fall (Arizona State University) and Gerald Kelso performed the pollen study. Data are incorporated into the analysis presented in the body of the report, specifically in Chapters 3, 4, 5, and 14. Information on the current disposition of the soil samples is provided in Table 1.7 at the end of this chapter.

Records

Database

Archaeological analysis requires integration of data on artifacts with data on archaeological contexts. The database designed for the archaeological component of the African Burial Ground project includes a number of data tables that contain un-coded information on individual burials, artifacts, and samples and can be linked by burial number or by catalog number. The basic burial, artifact, and photography log tables originally created by JMA in dBase were subsequently converted to Paradox and substantially altered and enlarged by the Howard University Archaeology Team's laboratory staff, and finally were converted to Microsoft Access in 2003 during the final phase of analysis. Key tables in the current database are listed in Table 1.4, and their structures are explained in Appendix H. The database will be available along with all project records at the Schomburg Center for Research in Black History in New York.

	Table 1.4.							
	Data tables in archaeological database							
Table	Contents							
	Provenience catalog for the Broadway site, including all burial and non-burial							
ABGCAT	contexts. This is a list of catalog numbers and all of the provenience data they							
	represent (features, burials, dates of excavation, excavators, etc.)							
ABG_DPTS	Locations and elevations of temporary sub-datum points used in the field.							
addfaun	Inventory of animal bone from grave shaft fill contexts.							
ARTPHOTOS	List of photographs of artifacts taken in 1998 (destroyed 9/11/2001).							
burial4	Basic data on each burial.							
Coffinsize	Coffin dimensions for each burial.							
conbur3	Inventory of all artifacts that were directly associated with skeletal remains, coffin							
Collburs	hardware, and material (other than floral and faunal remains) from grave fill contexts.							
DRAWINGS	List of all numbered drawings from the Broadway site.							
NewPinTable	List of straight pins from burials by location.							
NOTES	Transcribed information and notes from burial excavation field forms.							
PHOTOBKS	List of photographs of <i>in situ</i> burials.							
PHOTOLOG	List of photographs taken in the field and of conserved artifacts.							
SHELLFLOR	Inventory of shell and seeds from burial contexts.							
Stoneware	Inventory of local stonewares from grave shaft fill contexts.							
SOILSAMP	Inventory of all soil samples with information on processing to date.							
TOTWOOD	Inventory of wood samples from coffins.							

Artifact photographs

Selected artifacts (typically items conservators referred to as "burial artifacts" that had been found in direct association with skeletal remains, excluding coffin wood and hardware) were photographed by staff of John Milner Associates during laboratory processing and analysis from 1992 through 1995. Some were photographed before, during, and after conservation treatment. In addition to 35mm slides and black-and-white negatives, microscopic digital photographs were produced for a few items to aid in identification (e.g., textile/hair fragments and wood samples).

A second set of artifact photographs, consisting of 35mm slides and black-and-white negatives, was taken during 1997 at the World Trade Center laboratory by John Milner Associates staff. Only one set of the slides and one set of negatives were produced. Neither was recovered after the collapse of the World Trade Center on September 11, 2001.

In the summer of 2001, GSA planned reburial of skeletal remains and "burial artifacts," prompting production of a third and final set of 35mm photographic slides. This was considered necessary because in the opinion of the Howard University Archaeology Team the previous sets of artifact photographs were inadequate as a record of the items that could serve future research and exhibit purposes once the materials themselves were reburied. Preparations for the reburial were rushed (though ultimately the planned August 17, 2001 date was cancelled) and little time was allowed for the final inventory and photo-recordation of artifacts. The services of photographer Jon Abbott were secured, and he produced a full set of high-quality color slides, though typically just one or two shots for each item.

Finally, prior to the 2003 reburial, digital photographs were taken of a large subset of the artifacts from direct burial contexts. The high-resolution digital technology now available (through Jon Abbott) made it possible to produce numerous digital images of each artifact, from several angles. These are now available for future research. An example is produced in Figure 1.8. Artifact photographs are included in the project archive, which will be housed at the Schomburg Center for Research in Black Culture in New York.

Note on artifact photographs in this report: Artifact photographs reproduced herein include images from 35mm slides as well as digital images. In some cases the ruler placed in the photographic frame to provide scale (there were at least three separate rulers used during the various photo sessions) is visible in its entirety, but in most of the close-up photographs only the tick marks on the ruler are visible. The smallest tick-mark interval on the rulers is 0.5mm unless otherwise noted. In some photographs this interval is all that shows, while for others the 1mm, 0.5cm, and 1cm ticks are also visible. We have left the rulers in the images, but rather than label the tick marks on each, we have provided the size of the photographed item or items in the caption. Where no single dimension was measurable, we have stated the ruler interval in the caption.

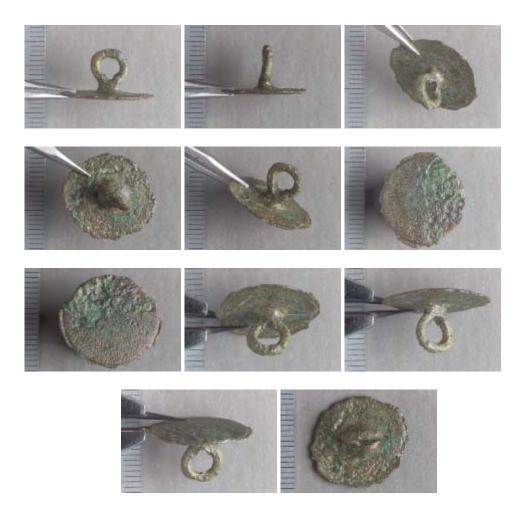


Figure 1.8. Example of a digital photographic series of an artifact (Burial 366, Catalog # 1830.002). Photographs by Jon Abbott. The images shown here are from low-resolution copies; high-resolution digital images are part of the project archive.

Replicas

In August 2003, shortly before the planned reburial, archaeologists from the National Park Service (within their capacity as consultants to GSA on the future Interpretive Center for the African Burial Ground) solicited bids for replication of artifacts. Only items that had been found in direct association with the deceased, and among these only items that were sufficiently intact to possibly be used in interpretation, were included in the assemblage targeted for potential replication. Colonial Williamsburg was contracted to prepare replicas, and selected a limited sub-set based on their resources and expertise (Table 1.5). Full recordation of the items was completed by the specialists who made the replicas. Due to the timing of preparations for the re-interment, these items were not photographed digitally.

Insufficient time remained to solicit subcontractors to replicate the remaining artifacts, or record them for replication, prior to the reburial. However, photographs and descriptive information can be used as the basis for future replication of additional artifacts. Some artifacts were not given priority for replication because they are types that can be represented by virtually

identical, and readily obtainable, examples. This is the case for the beads and the coins. An example of one of the replications, copper alloy straight pins, is shown in Figure 1.9. Several replicas were made of each item selected.

	Table 1.5.						
	Items selected for replication						
Burial	Items						
6	1 large button (plain face), Catalog # 219-B.008						
10	1 button, Catalog # 234-B.004						
12/14	12 straight pins, Catalog # 253-B.001, .002, .003 and Catalog # 274-B.001, .002, .003						
71	1 finger ring, Catalog # 813-B.004						
147	7 small rings, Catalog # 892-B.004						
158	cuff links, 1 pair, Catalog # 903-B.001						
181	2 buttons, Catalog #s 967-B.005 and .006						
211	cuff link or button face, enameled, Catalog # 1186-B.001						
214	1 button, Catalog # 1191-B.002						
238	cuff links, 1 pair, Catalog # 1224-B.001						
250	1 button, Catalog # 1239-B.002						
254	1 silver pendant, Catalog # 1243-B.001						
310	1 paste ring (with glass insets), Catalog # 1486-B.001						
313	1 button, Catalog # 1516-B.001						
371	2 cuff link faces, enameled, Catalog #1875-B.001						
392	4 buttons, all with Catalog # 2039-B.002						
398	1 finger ring, Catalog # 2061.001						
403	1 button, Catalog #s 2067-B.003						
405	1 button, Catalog # 2071B.001						
415	1 button, Catalog # 2097-B.004						

Figure 1.9 (below).
a. Copper alloy straight pin as recovered in the field. Photograph by Jon Abbott.
b. Replicas of African Burial Ground pins created by artisans at Colonial Williamsburg. Photograph by Rob Tucher.

a.





1.D. September 11, 2001

The African Burial Ground archaeological laboratory in the sub-basement level of 6 World Trade Center was left partially intact following the collapse of the towers and other surrounding buildings on September 11, 2001. In October 2001, in advance of demolition of the damaged structure, the General Services Administration and the Federal Emergency Management Agency coordinated efforts to recover material from the laboratory. A salvage team entered the facility and retrieved many boxes of artifacts and surviving documents. The degree of retrieval is considered remarkable, considering the overall damage to the space; however, some artifacts and documents were not salvaged. Categories of materials that are known to have been lost are enumerated in Table 1.6. Individual items that were lost (but had already been inventoried) are identified in the artifact inventory, Appendix E.

Archaeological materials that were salvaged were decontaminated, re-bagged in some cases (original bags were retained, however, and kept with the materials) and re-boxed by a GSA contractor. Records that were salvaged (namely the slide and photo negative collections) were also decontaminated and placed in new binders. A new laboratory was set up at 1 Bowling Green in New York. Upon the resumption of archaeological work by the Howard University team in 2003, the boxes were examined and some errors made by the decontamination team when labeling the new bags were noted and corrected.

Fortunately, as of July 31, 2001, items that had been selected by GSA at that time for reburial had been packed and shipped off site (to Artex, an arts handling firm with facilities in Landover, Maryland). These included the artifacts thought to have been placed directly with the deceased in each burial, and thus all such items were saved. However, some of the materials left behind in the laboratory and later lost on September 11 belonged to categories of material that were subsequently added to the reburial plans (see below), such as coffin remains and excess soil from samples. Therefore, when ultimately reburied on October 4, 2003, some individuals were missing materials that had been recovered from their original graves, typically coffin remains (nails and wood).

Also fortunate was the storage of all original individual burial field records at the Cobb Laboratory at Howard University. Copies of these records were in the World Trade Center lab (they were not salvaged after September 11) and a set was also kept at GSA's New York offices, but the original documentation of the excavations of burials, especially the excavators' notes and *in situ* drawings, is invaluable.

Items not r	Table 1.6. Items not recovered after World Trade Center collapse, September 11, 2001								
Category	Material lost	Comments							
Artifacts and sam	pples	1							
Coffin wood	Burials 26 through 50; Burials 126 through 175; All samples stored in freezer	Bags had been inventoried; freezer samples had been damaged by mold prior to 9/11.							
Coffin hardware	Burials 76 through 125; All items set aside for x-rays	These items had been inventoried.							
Artifacts from grave shafts	Burials 76 though 125; tobacco pipe fragments from all burials	Only ceramics had been inventoried.							
Artifacts from uncertain proveniences	All burials	Items lost were those set aside during the selection and packing of reburial artifacts in July 2001.							
Soil samples	Burial 42; Burials 51 through 53 and 58 through 63, except for control sample heavy and light fractions; Burials 70 through 126; Burials 172 through 175 except for control sample heavy and light fractions; Burial 219; Burials 315 through 319 except for control sample heavy and light fractions	Samples that had been pulled from the shelving for any reason and set aside were not salvaged. Numerous control samples were off-site at New South Associates on 9/11/01.							
Faunal remains	Burials 1 through 25; Burials 76 through 125; Burials 326 through 350	Includes shell and animal bone							
Floral remains	Inventoried seeds from all burials	Seeds had been quantified but not identified							
Grave markers	Cobbles from burials in southwest area of site; headstones from Burials 18, 23, 47.	Only 9 cobbles that had been boxed along with Burial 13 artifacts were salvaged.							
Records and docu	iments								
Maps	Site maps on mylar; In situ and detail bead drawings for Burial 340	Photocopies (poor quality) of most of these were stored off-site. The lost set had mark-ups for CADD editing.							
Photographs	Color slides of artifacts taken in 1998; 35mm black-and-white negatives of artifacts; Black-and-white large-format negatives of artifacts; One set <i>of in situ</i> color slides of Burials 1 through 57.	Artifact slides were stored at OPEI, which was located in the same building; materials housed there were not salvaged.							
Inventories	Paper copy of conserved artifact inventory with all hand-written notes taken during packing of reburial artifacts, July 2001; manuscript original of coffin hardware inventory; preliminary flotation sample inventory.	This artifact inventory was annotated to indicate which items had been packed for reburial and sent to Artex.							
Research files	Four file drawers of reprints for comparative research	Material compiled by JMA and Howard staff							

1.E. Reburial

The Memorandum of Agreement entered into by GSA, the Advisory Council on Historic Preservation, and the New York City Landmarks Preservation Commission stipulated that human remains and "burial associated artifacts" were to be re-interred. As plans were developed for the re-interment that took place in October of 2003, decisions had to be made as to exactly what materials were included in this mandate. Of course, the skeletal remains were always intended to be reburied, although small samples of bone were retained for future analyses. Confusion about artifacts arose, however, because the phrase "burial artifacts" had been used early on in the conservation laboratory to refer only to those items that had been placed in direct association with the deceased. Project conservators had estimated that there were 500 such items. Yet the coffin remains themselves (wood and hardware) were also clearly "burial associated."

More problematic were items found in grave shaft fill soils. Since over most of the site there was no remnant of the original ground surface (see Chapter 3 below), there was no way of determining whether artifacts in the soils had at one time been placed on a grave. For the most part, material found in the shafts of graves is believed to have been present in the soil matrix used to fill the graves at the time of the interment. Thus it is material that lay strewn on the surface or in shallow deposits covering the ground when the grave was originally dug. Some of this material represents a thin, scattered deposit of common 18th-century refuse, including glass and ceramic sherds, bits of brick and nails, fragments of animal bone, and so forth. In one area of the site there was a good deal of animal bone thought to be waste material, perhaps from a nearby tannery. But by far the most ubiquitous class of grave shaft material is stoneware kiln debris (sherds from broken pots, kiln waste, and kiln furniture). The latter material is basically "industrial waste" from pottery kilns that stood on the burial ground in the 18th-century (see Chapters 2 and 4 below).

In the end GSA made a decision to exclude artifacts that were found in grave shaft fill from reburial. This decision was arrived at after discussions among representatives of the public (who attended public meetings on the subject), GSA, the Howard University research team, and the National Park Service (in its role as consultant to GSA on the future Interpretive Center and disposition of the collection). Our reasoning was that these materials were not deliberately placed with the deceased, do not represent actions on the part of mourners, and lacked spiritual meaning at the time of interment. In fact, most of those who entered the discussion felt that these items represent depredations on the cemetery that occurred during the period of its use. Other parties expressed interest in the future research potential of the materials and in their potential use in interpretive programs, and believed they should be excluded from reburial for these reasons as well. It should be pointed out, however, that some in the descendant community had a differing opinion on this matter, feeling instead that the presence of these materials in the sacred

¹² In some cases, artifacts appeared to excavators to be directly on the coffin lid, and when such items are thought *possibly* to have been placed there deliberately they have been included in the reburial.

ground of the cemetery over the past two to three hundred years had in fact imbued them with a spiritual essence by virtue of their close contact with the remains of the ancestors (Mrs. Ollie McLean, personal communication).

What does the non-skeletal retained collection currently consist of, how is it organized, and where is it stored? Table 1.7 summarizes the retained artifact collections and their disposition as of this writing. All material is bagged in plastic, labeled according to catalog number and burial, and boxed according to burial. The boxes were transferred to the custody of the Army Corps of Engineers, acting as GSA's technical representative, on February 27, 2006. Following processing at the Corps' St. Louis facility, the collection will be returned to New York to be housed at the Schomburg Center for Research on Black History and Culture.

Table 1.2, the list of excavated burials, follows Table 1.7.

Table 1.7. Artifact categories, counts, and current disposition								
Category	Approx- imate count	Notes	Current status					
Artifacts other than coffins recovered in direct association with skeletal remains	1,628	Includes over 1,200 fragments of straight pins from shrouds or clothing; buttons; jewelry; beads; and other items such as coins and pipes).	Reburied at the site, in coffins with human remains, October 2003.					
Coffins:								
Coffin furniture, nails, and screws	14,057		Reburied at the site, in coffins with human remains, October 2003.					
Coffin wood samples	529		Reburied at the site, in coffins with human remains, October 2003.					
Artifacts recovered from grave shaft fill soil	24,000	This category includes small sherds of glass, brick, animal bone, shell, and fragments of iron. Its largest component, however, is 18,366 ceramic pieces, mainly waste material from the potteries that were in operation immediately adjacent to the excavated part of the cemetery.	Transferred to Army Corps of Engineers, February 2006.					
Soil Samples	1,200	Two or more soil samples were taken from each burial, usually from the coffin lid, the interior or stomach area, and an outside sample for comparison.	Half-liter sub-samples of unfloated soil and all light fractions were transferred to Army Corps of Engineers, February 2006. All remaining soil has been reburied at the site.					

Table 1.2. List of excavated burials with age, sex, and location 13									
Burial	Age Category	Low age	High age	Sex	Grid East	Grid South	Elevation		
B001	adult	20	25	female?	2	82.5	9.13		
B002	adult	27	42	male	11	43.5			
B003	adult	25	35	male	2	107			
B004	adult	30	40	male	11	86.5			
B004A	adult	20	25	male?	11	86.5			
B005	subadult	0.5	1	undetermined	9	86.5	8.17		
B006	adult	25	30	male?	15	87.5	6.98		
B007	subadult	3	5	undetermined	15	80.5	7.29		
B008	infant	0	0.5	undetermined	5	82.5	6.58		
B009	adult	35	45	male	25	89.5	5.44		
B010	adult	40	45	male	20	82.5	6.04		
B011	adult	30	40	male?	12	83.5	6.73		
B012	adult	35	45	female	12	89.5	6.13		
B013	Remains app	ear to b	elong v	vith Burial 43.	-5	103.5	6.37		
B014	infant	0	0.5	undetermined	12	89.5	6.1		
B015	subadult	11	18	undetermined	-5	103.5	7.27		
B016	adult	50	60	female	0	107	6.03		
B017	subadult	4	6	undetermined	20	83.25	4.94		
B018	adult	35	45	female?	12	81.5	4.53		
B019	subadult			undetermined	20	81.5	6.36		
B020	adult	45	50	male	0	85	8.68		
B021	subadult			undetermined	20	87.5	6.42		
B022	subadult	2.5	4.5	undetermined	-1.5	96.5	6.97		
B023	adult	25	35	male	8	87.5	5.48		
B024	subadult	3	6	undetermined	5	87.5	7.88		
B025	adult	20	24	female	20	87.5	6.07		
B026	subadult	8	12	undetermined	20	83	3.74		
B027	subadult	1.4	2.8	undetermined	5	88.5	6.73		
B028	subadult			undetermined	-2	83	8.58		
B029	adult	35	45	male?	0	97.5	3.92		
B030	subadult	7	11	undetermined	10	86	5.48		
B031	adult	14	16	undetermined	-1	103.5	6.47		

¹³ Low and high ages reflect the range of possible ages determined by the skeletal biological team. Blanks indicate age range could not be determined from the remains. To be consistent with the skeletal analysis, in this table "infant" includes individuals calculated as 6 months of age or less; "subadult" includes those over 6 months and under 15 years of age. Age calculation is described in Chapter 4 of the Skeletal Biology Report. For sex, a question mark indicates probable assignment. Grid coordinates (see the Site Map, Figure 1.x) are in feet, and elevations are feet above mean sea level (Sandy Hook) for the highest skeletal element (or coffin remains if no skeletal elements present).

Table 1.2. List of excavated burials with age, sex, and location ¹³									
Burial	Age Category	Low age	High age	Sex	Grid East	Grid South	Elevation		
B032	adult	50	60	male	23.5	86.5	5.74		
B033	adult			undetermined	10	87.5	5.48		
B034	adult			undetermined	15	87.5	6.02		
B035	subadult	8	10	undetermined	15	87.5	6.08		
B036	adult			female	-5	87.5	8.17		
B037	adult	45	55	male	20	65	7.44		
B038	adult	12	18	female	10	86	5.18		
B039	subadult	5	7	undetermined	40	81.75	4.69		
B040	adult	50	60	female	10	65	7.88		
B041	adult			undetermined	-11	99.5	7.57		
B042	infant	0	2	undetermined	45	91.5	4.92		
B043	subadult	2.5	4.5	undetermined	-7	105	6.42		
B044	subadult	3	9	undetermined	21.5	85.5	5.54		
B045	subadult	2.5	4.5	undetermined	-5	103.5	6.77		
B046	adult			female?	0	95.5	5.27		
B047	adult	35	45	male	0	103.5	6.42		
B048	adult			undetermined	20	87.5	4.89		
B049	adult	40	50	female	40	87.5	3.76		
B050	subadult			undetermined	30	87.5	5.81		
B051	adult	24	32	female	10	75	8.58		
B052	undetermined			undetermined	25	87.5	4.69		
B053	subadult	0.25	0.75	undetermined	0	87.5	7.85		
B054	adult			undetermined	-4	92	7.63		
B055	subadult	3	5	undetermined	0	92.2	7.65		
B056	adult	30	34	female	17	87.5	5.64		
B057	subadult	0.88	2.16	undetermined	25	87.5	5.27		
B058	subadult	3.5	4.5	undetermined	15	65	7.42		
B059	infant	0	0.25	undetermined	15	65	6.58		
B060	subadult	0.25	0.75	undetermined	-1	95	7.73		
B061	undetermined			undetermined	45	87.5	5.53		
B063	adult	35	45	male	15	70	7.12		
B064	subadult	0.38	0.88	undetermined	45	92.5	5.25		
B065	infant	0	0.49	undetermined	10	75	8.58		
B066	infant	0	0.16	undetermined	25	93.5	5.23		
B067	adult	40	50	male	0	94	7.28		
B068	adult	21	25	male	3.5	91	5.93		
B069	adult	30	60	male	-3.5	89	6.53		
B070	adult	35	45	male	10	92.5	5.98		
B071	adult	25	35	female	10	75	7.86		
B072	subadult	1	2	undetermined	34	87.5	6.29		

Table 1.2. List of excavated burials with age, sex, and location 13									
Burial	Age Category	Low age	High age	Sex	Grid East	Grid South	Elevation		
B073	adult	20	30	female?	10	79	7.28		
B074	N	o remair	ns extai	nt.	15	80	5.73		
B075	infant	0	0	undetermined	34	92.5	5.99		
B076	adult	25	55	male	10	75	8.33		
B077	subadult	0.67	1.3	undetermined	35	88.5	5.26		
B078	adult	16	19	undetermined	10	91	4.31		
B079	subadult	0.25	0.75	undetermined	6	82	7.88		
B080	subadult			undetermined	40	87.5	3.61		
B081	adult			female	-3	93	6.93		
B082	adult	18	25	female	3	93	6.03		
B083	subadult			undetermined	31	87.5	5.53		
B084	adult	17	21	female	35	87.5	4.45		
B085	subadult	0.25	0.75	undetermined	15	80.5	6.79		
B086	subadult	6	8	undetermined	18	74	7.89		
B087	subadult	4	6	undetermined	3	94	6.88		
B088	undetermined			undetermined	-4	93.5	6.36		
B089	adult	50	60	female	48	90.5	4.8		
B090	adult	35	40	female	4	81.5	6.81		
B091	subadult	0.67	1.3	undetermined	48	95	4.95		
B093	adult			undetermined	-3	85	6.98		
B094	subadult			undetermined	47	92.5	4.75		
B095	subadult	7	12	undetermined	51	94.5	4.85		
B096	adult	16	18	male	47	94.5	5.33		
B097	adult	40	50	male	20	81	6.73		
B098	subadult	1	2	undetermined	20	81	6.23		
B099	subadult	6	10	undetermined	70	91.5	4.92		
B100	subadult			undetermined	20	80.5	5.44		
B101	adult	26	35	male	49	88.5	4.32		
B102	subadult	1.33	2.67	undetermined	20	79.5	5.93		
B103	subadult			undetermined	20	79.5	5.83		
B104	adult	30	40	female	61	89.5	3.89		
B105	adult	35	45	male	60	95	4.37		
B106	adult	25	35	female?	71	90.5	3.85		
B107	adult	35	40	female	48	90	3.94		
B108	subadult	0.25	0.75	undetermined	53	87	5.4		
B109	subadult	0.67	1.33	undetermined	54	90.5	4.32		
B110	infant	-0.17	0.17	undetermined	78	90	5.33		
B111	subadult	0.67	1.33	undetermined	53	91.5	4.87		
B112	subadult	0.25	0.75	undetermined	82.5	89	4.52		
B113	adult			undetermined	60	91.5	3.62		

Table 1.2. List of excavated burials with age, sex, and location 13								
Burial	Age Category	Low age	High age	Sex	Grid East	Grid South	Elevation	
B114	adult	45	50	male	91	94.5	3.79	
B115	adult	25	35	female	89	89.5	3.81	
B116	adult	45	55	male	81.5	95.5	3.64	
B117	infant	0	0	undetermined	77	91.5	4.14	
B118	adult			undetermined	55	94.5	4.18	
B119	adult	35	45	male	72	88.5	3.79	
B120	adult	25	34	female	70	88.5	3.54	
B121	subadult	2.5	4.5	undetermined	70	86	4.19	
B122	adult	18	20	female	61	93	3.53	
B123	subadult	0.67	1.33	undetermined	80	89.5	4.04	
B124	adult			undetermined	95	91.5	5.09	
B125	adult			female?	52	64.5	3.96	
B126	subadult	3.5	5.5	undetermined	80.5	88	3.4	
B127	subadult	0.67	1.33	undetermined	95	90	3.71	
B128	infant	0	0.17	undetermined	83	92.5	3.45	
B129		Empty	coffin.	<u>I</u>	95	91.5	4.54	
B130	subadult	1	2	undetermined	56	92	3.27	
B131	subadult			undetermined	76.5	91.5	3.83	
B132	adult	25	30	male	61.5	64.5	4.01	
B133	subadult	1	2	undetermined	78	96	4.06	
B134	adult	40	50	female	85	62.5	2.23	
B135	adult	30	40	male	70	70	2.81	
B136	subadult			undetermined	86.7	95	4.09	
B137	adult	25	35	undetermined	75	63	3.86	
B138	subadult	3	5	undetermined	86	67.5	4.13	
B142	adult	25	30	female	90	88	4.05	
B143	subadult	6	10	undetermined	80.5	88	3.11	
B144	infant	0	0.17	undetermined	90	88	3.8	
B145		Empty	coffin.		74	73.5	4.93	
B146	infant	0	0	undetermined	74.5	73.5	4.72	
B147	adult	55	65	male	56.5	70.5	3.88	
B148	adult	12	18	undetermined	70	91.5	3.27	
B149	subadult	0.5	1	undetermined	90	88	3.85	
B150	adult	20	28	female	80	70.5	4.43	
B151	adult	35	45	male	83	67.5	3.84	
B152	undetermined			undetermined	67	55.5	1.9	
B153	adult			female?	74	54.5	1.48	
B154	adult	25	29	female	75	95.5	3.43	
B155	adult			undetermined	75	92	3.14	
B156	adult	30	60	female	115	66.5	2.35	

Table 1.2. List of excavated burials with age, sex, and location ¹³									
Burial	Age Category	Low age	High age	Sex	Grid East	Grid South	Elevation		
B157	adult	•		female?	81.5	53.5	1.87		
B158	adult	20	30	male	92	63	2.17		
B159	adult	25	35	female	90	73.5	3.43		
B160	subadult	3.5	5.5	undetermined	98.5	73	3.1		
B161	subadult			undetermined	90	74.5			
B162	adult	35	45	male	51.5	55	2.31		
B163	adult	18	24	male?	99	74.5	2.18		
B164	subadult	8	13	undetermined	91	52.5	1.47		
B165	adult			undetermined	73	62.5			
B166	subadult	0.5	1	undetermined	92.5	55.5	2.1		
B167	subadult	8.5	12.5	undetermined	65	86.5	2.56		
B168	adult			male	68.5	95.5	4.87		
B169	subadult	5.5	9.5	undetermined	81	91.5	2.67		
B170	subadult	7	11	undetermined	65	96	4.33		
B171	adult	44	60	male	99.5	53.5	1.05		
B172	adult	25	35	female	88	40.5	1.61		
B173	subadult	0.25	0.75	undetermined	101	57	0.55		
B174	adult	17	18	male	90	60.5	2.31		
B175	adult	24	28	male	64.5	72	4.44		
B176	adult	20	24	male	65.5	74.5	3.1		
B177	adult	30	60	undetermined	80	91.5	2.23		
B178	adult			male	57	62	4		
B179	adult	25	30	male	98	46.5	-0.3		
B180	subadult	11	13	undetermined	97.5	50	0.12		
B181	adult	20	23	male	115	66	2.23		
B182	subadult	7.5	12.5	undetermined	69	94	3.81		
B183	subadult	0.63	1.13	undetermined	113.5	50	0.33		
B184	subadult	1	1.5	undetermined	108.5	52	0.44		
B185	adult	21	23	male	122	54.5	0.85		
B186	infant	0	0.17	undetermined	110	47.5	0.09		
B187	subadult	1.5	4	undetermined	119.5	52.5	0.94		
B188	adult	26	32	undetermined	52.5	58.5	3.85		
B189	adult			undetermined	65.5	95.5	3.42		
B190	subadult	0.38	0.88	undetermined	100.5	55	0.57		
B191	adult	25	30	male	87.5	56.5	1.83		
B192	adult	40	60	female	101.5	67			
B193	adult	30	48	male	101.5	65.5			
B194	adult	30	40	male	84	50.5	0.95		
B195	adult	30	40	female	63	81.5			
B196	adult	20	24	undetermined	56	83	4.14		

Table 1.2. List of excavated burials with age, sex, and location ¹³									
Burial	Age Category	Low age	High age	Sex	Grid East	Grid South	Elevation		
B197	adult	45	55	female	57.5	76	4.05		
B198	subadult			undetermined	80	86.5	3.61		
B199	adult	30	40	female	80	73.5	3.39		
B200	adult			male	77	75.5	3.57		
B201	subadult	1.5	3.5	undetermined	70.5	59.5	3.25		
B202	adult	12	18	female?	70	85.5	3.4		
B203	adult	12	18	undetermined	77	59	4.04		
B204	adult			female?	98	77.5	3.81		
B205	adult	18	20	female	102	59.5	0.41		
B206	N	o remair	ns extai	nt.	93	75.5	3.31		
B207	adult	25	35	female?	95	78.5	3.76		
B208	subadult	0.5	1	undetermined	96	77	3.7		
B209	adult	40	50	male	94	42	0.43		
B210	adult	35	45	male	116	46	0.22		
B211	adult			male?	79.5	77	3.93		
B212	subadult	4.5	5.5	undetermined	55	82.5	3.85		
B213	adult	45	55	female	85.5	84.5	3.93		
B214	adult	45	55	male	63.5	79.5	4.84		
B215	infant	0	0.16	undetermined	72.5	81.5	4.57		
B216	infant	0	0.16	undetermined	57	78.5	4.47		
B217	adult	17	19	male	122.5	64.5	1.34		
B218	subadult	0.5	3.5	undetermined	73	89	3.48		
B219	subadult	4	5	undetermined	122	71.5	2.2		
B220	N	o remair	ns extar	nt.	92	78	3.75		
B221	adult	30	60	male	77	83.5	3.55		
B222	adult			male?	118	76.5	0.24		
B223	adult	25	35	female	76.5	66.5			
B224	subadult	0.5	1.33	undetermined	97	77.5	2.39		
B225	subadult	0.5	1.25	undetermined	95.5	64.5			
B226	infant	0	0.17	undetermined	77	83			
B227	undetermined			undetermined	84	77	4.22		
B228	adult			male?	55	86	4.2		
B229	subadult	6.75	11.25	undetermined	72	83.5	4.22		
B230	adult	55	65	female	106	45.5			
B231	N	o remair	ns extai	nt.	97	77.5			
B232	N	o remair	nt.	97	77.5	2.41			
B233		o remair	1		127	73			
B234	infant	0	0.5	undetermined	96.5	77.5	2.24		
B235	adult	28	42	female	123	71.5			
B236	subadult	4	5	undetermined	53.5	84.5	3.86		

Table 1.2. List of excavated burials with age, sex, and location 13								
Burial	Age Category	Low age	High age	Sex	Grid East	Grid South	Elevation	
B237	undetermined			undetermined	55.5	80	4.11	
B238	adult	40	50	male	62	78.5	3.43	
B239	subadult	1.5	3.5	undetermined	70	83.5	3.8	
B240	subadult	0.88	2.66	undetermined	95.5	79.5	2.73	
B241	adult	55	65	female	121	54.5	-0.18	
B242	adult	40	50	female	117	49.5	-0.3	
B243	adult	40	50	male	121	57.5	0.1	
B244	subadult	5	9	undetermined	90	51.5	0.88	
B245	subadult	2.5	4.5	undetermined	85.5	75	3.55	
B246	subadult	0.5	2.9	undetermined	70	82.5	3.77	
B247	adult	35	49.9	male?	90	84.5	3.69	
B248	subadult	14	15	undetermined	118.5	71.2	1.14	
B249	subadult	0.67	1.33	undetermined	87	81	4.16	
B250	adult			undetermined	84	80.5	4.07	
B251	subadult	12	14	undetermined	79	79.5	3.73	
B252	subadult	1	2	undetermined	95.5	64.5		
B253	subadult	13	15	undetermined	65.5	82.5	4.02	
B254	subadult	3.5	5.5	undetermined	97.5	79.5	2.08	
B255	infant	0	0.17	undetermined	117.9	79.3	1.81	
B256	adult	40	60	male	79	77.5	2.82	
B257	adult	30	40	male	64.5	72.1	3.21	
B258	infant	0	0.5	undetermined	78	85.5	3.21	
B259	adult	17	19	female?	102	40.5	0.47	
B260	undetermined			undetermined	53.5	84.5	3.89	
B261	No remains extant.					87.5	3.5	
B262	adult	15	17	male?	120	38.5	-0.31	
B263	subadult			undetermined	74	88.5	3.2	
B264	adult			undetermined	55	80	4.15	
B265	subadult	0.5	1	undetermined	120	82	1.74	
B266	adult	25	35	female	113.5	38.5	-0.59	
B267	adult			undetermined	94	82.5	4.09	
B268	infant	0	0.5	undetermined	125.5	74.5	0.4	
B269	n/a			n/a				
B270	adult			male	123.5	84.5	1.44	
B271	adult	45	57	male	65	76.5	3.7	
B272	subadult	0.25	0.75	undetermined	74.5	88.5	2.8	
B273	undetermined			undetermined	52.5	81.5	4.27	
B274	Remains app	pear to b	elong t	o Burial 280.	70	79.5	3.55	
B275	adult			female?	50	81	3.36	
B276	adult	20	24	female	118.5	35.5	4.99999	

Table 1.2. List of excavated burials with age, sex, and location 13								
Burial	Age Category	Low age	High age	Sex	Grid East	Grid South	Elevation	
B277	subadult	<u> </u>		undetermined	51	77.5	4.01	
B278	adult	45	55	male	103	42	-0.34	
B279	adult			undetermined	75.5	76.5	3.32	
B280	adult			female?	70	83	2.8	
B281	adult			male?	75	79.5	3.78	
B282	adult	32.5	42.5	male	71.5	77.5	3.35	
B283	subadult	0.33	0.67	undetermined	123	76	1.16	
B284	adult	21	28	male	115.5	80.5	2.09	
B285	adult	20	30	female	64	80.5	3.57	
B286	subadult	4.4	8.5	undetermined	126	75	0.61	
B287	adult	18	20	male	53	73.5	3.63	
B288	adult			undetermined	120	74.5	1.61	
B289	subadult	5	9	undetermined	125	81	1.73	
B290	adult	45	55	male	114	84	2.32	
B291	subadult	3	5	undetermined	94	82.5	4.01	
B292	adult			undetermined	121	72.5	1.93	
B293	adult			male?	94	82.5	3.55	
B294	subadult	0.5	1	undetermined	86.5	88	4.19	
B295	adult	30	50	female	70	82	2.59	
B296	infant	0.5	2.9	undetermined	98	84	4.2	
B297	adult	30	40	male	117.5	62.5	0.04	
B298	subadult	0.67	1.33	undetermined	123	66.5	1.99	
B299	adult	40	50	male	123.5	68.5	1.32	
B300	infant			undetermined	125.5	76	0.82	
B301	adult			undetermined	100.5	86	4.17	
B301a	undetermined			undetermined	100.5	86		
B302	adult			female?	99.5	88.5	3.96	
B303	subadult	0.5	1	undetermined	76.5	73.5		
B304	subadult	3	5	undetermined	109	81.5	1.97	
B305	infant	-0.33	0.33	undetermined	122	57	-1.11	
B306	adult	28	44	male	125	76.5	0.1	
B307	adult	45	55	male?	115.5	82.5	2.02	
B308	subadult			undetermined	109	84.5	1.31	
B309	adult	20	25	male	143.5	62	1.89	
B310	adult	44	52	female	60	75.5	2.49	
B311	subadult	0.25	0.75	undetermined	99.5	88.5	3.41	
B312	infant	0	0.3	undetermined	67	75	3.38	
B313	adult	45	55	male	114.5	31.5	-1.5	
B314	adult	40	50	male	134	82		
B315	adult	30	40	female	127	83	1.41	

Table 1.2. List of excavated burials with age, sex, and location 13								
Burial	Age Category	Low age	High age	Sex	Grid East	Grid South	Elevation	
B316	adult	18	20	female	99.5	88.5	3.02	
B317	adult	19	39	male?	220	91.5	2.21	
B318	subadult	7.5	14	undetermined	144	78	1.95	
B319	adult			female	249	88.5	2.25	
B320	subadult	2	4	undetermined	251.5	90	1.73	
B321	subadult	1	2	undetermined	143	79.5	0.39	
B322	adult			female	140	64.5	2.47	
B323	adult	19	30	male	128.5	45		
B324	adult	25	35	female	132	69	1.83	
B325	adult	25	35	male	137.5	63.5	0.89	
B326	adult	45	55	male	135	73.5		
B327	adult	35	45	male	129	48.5		
B328	adult	40	50	female	241	84.5		
B329	adult			male	128.5	56		
B329.1	adult			undetermined	128.5	56		
B330	adult	28	58	male	140	58.5	0.72	
B331	adult	30	35	undetermined	137	58	0.52	
B332	adult	35	40	male?	126	80.5	0.67	
B333	adult	45	55	male	230.5	81.5	1.14	
B334	subadult			undetermined	251	89	1.63	
B335	adult	25	35	female	248	84.5	0.36	
B336	subadult	0.5	1	undetermined	125.5	83	0.68	
B337	adult	40	50	male	130	37	-0.67	
B338	adult	33	65	female	133.5	84.5	0.69	
B339	subadult			undetermined	123	83	1.39	
B340	adult	39.3	64.4	female	236.5	88.5	0.27	
B341	adult			male	229.5	87.5	1.26	
B342	adult	25	35	female?	129	50	-0.73	
B343	adult	19	23	male	130	59.5	-0.02	
B344	adult	25	35	male?	255	87.5	0.84	
B345	adult			undetermined	254	74.5	0.52	
B346	adult	50	70	female	138.5	57.5	-0.25	
B347	subadult	0.5	1	undetermined	130	73.5	0.97	
B348	subadult	1	2	undetermined	138	66	1.62	
B349	infant	0	0.5	undetermined	132	72	1.64	
B350	undetermined			undetermined	133.5	82	1.18	
B351	adult	50	60	male	145	84.5	0.39	
B352	adult			male	131	67.5	1.47	
B353	adult	24	34	male	230	84.5		
B354	adult	35	45	male	129.5	44.5	-1.16	

Table 1.2. List of excavated burials with age, sex, and location 13							
Burial	Age Category	Low age	High age	Sex	Grid East	Grid South	Elevation
B355	adult			undetermined	235	74.5	3.19
B356	subadult			undetermined	248	84.5	-0.01
B357	adult	45	65	male	228.5	72	-0.31
B358	adult			female?	230	89.5	1.93
B359	N	o remair	ns exta	nt.	127.5	84.5	1.47
B360	N	o remair	ns exta	nt.	235	75.5	0.24
B361	adult	33	57	male	249	88.5	0.77
B362	adult			undetermined	235	69.5	-0.81
B363	subadult	1	2	undetermined	135	49.5	-0.35
B364	adult	25	35	male	143.5	44.5	-0.23
B365	adult			female	257.5	79.5	-0.06
B366	adult	34	62	undetermined	224	78	0.73
B367	adult	25	35	female?	130	72	2.08
B368	subadult	10.5	13.5	undetermined	246.5	80.5	0.86
B369	adult	40	50	male	131	54	-0.21
B370	subadult	2	4	undetermined	146.5	82	0.79
B371	adult	25	35	female	235	69	-2.88
B372	adult	25	35	female	235	81	1.91
B373	adult	45	60	female	132	70.5	-0.97
B374	infant	0	0.25	undetermined	132.5	72	1.36
B375	adult	16	18	female	253	74.5	-0.4
B376	adult	45	65	male	134.5	77	0.45
B377	adult	32.6	57.8	female	235	75.5	-0.44
B378	undetermined			undetermined	235	75.5	-0.28
B379	adult	30	40	male	215	71.5	0.16
B380	adult	40	60	male	241	85	0.51
B381	undetermined			undetermined	235	75.5	-0.68
B382	subadult	4	5	undetermined	215	71.5	0.17
B383	adult	14	18	female	245	79	-0.76
B384	adult	25	45	female	248	91.5	0.59
B385	adult	40	60	female	251.5	86	0.83
B386	infant	0	0.3	undetermined	121.5	48	0.37
B387	adult	34	44	male	227	78	-0.25
B388	adult	29	57	female	222	75.5	-0.38
B389	adult			female	220	82	1.87
B390	adult	25	35	male	140	71.5	1.41
B391	adult	16.5	19.5	male	140.5	68	1.69
B392	adult	42.5	52.5	male	140	71.5	1.04
B393	infant	-0.17	0.17	undetermined	211	84	2.54
B394	adult	16	25	undetermined	185	59.5	-0.59

Table 1.2. List of excavated burials with age, sex, and location 13								
Burial	Age Category	Low age	High age	Sex	Grid East	Grid South	Elevation	
B395	adult	43	53	male	135.5	76.5	-1.11	
B396	subadult	6.5	8.5	undetermined	224	82.5	1.43	
B397	adult	30	40	female	229	87	0.51	
B398	adult	25	35	undetermined	255.5	93	0.67	
B399	infant	0	0.3	undetermined	213	78	-0.08	
B400	adult	25	35	male	130	65.5	2.09	
B402	adult			undetermined	235	84.5	1.06	
B403	adult	39	65	male	255.5	93	1.12	
B404	adult			female	165	79.5		
B405	subadult	6	10	undetermined	211.8	83.9	2.22	
B406	infant	0	0.5	undetermined	253.5	68.25	0.02	
B408	adult			male?	158	79.5	0.5	
B410	adult			female	178	69.5	1.05	
B412	infant	0	0	undetermined	218.5	78.5	2.1	
B413	adult	50	70	female	175.5	62.5	0.97	
B414	adult	39	59	male	165	74	0.97	
B415	adult	35	55	male	215	81	1.81	
B416	adult			undetermined	142	71.5	1.28	
B417	subadult	9.5	14.5	undetermined	165	64.5	1.14	
B418	adult	30	55	male	163	64.5	0.86	
B419	adult	48	62	male	206.5	71.5	0.4	
B420	adult	35	45	male	186.5	69.5	0.63	
B422	N	o remair	ns extai	nt.	212.5	86.5	2.22	
B423	Re	mains le	ft in pla	ice.	162	67	0.74	
B424	adult			undetermined	220	76	-1.07	
B425	adult			female	253	79.1	0.35	
B426	Remains lef	t in plac	e (pres	umed adult).	141	69.5	1.52	
B427	adult	16	20	male?	179	69.5	0.28	
B428	adult	40	70	female	147.5	66.5	1.57	
B429	Remains lef	t in plac	e (pres	umed adult).	215	64.5		
B430	Remains left in place (presumed adult).					84.5		
B431	adult			undetermined	162	79.5	0.48	
B432	adult			undetermined	220	78	-0.89	
B433	Remains left in place.					79.5		
B434	Remains left in place.					79.5		
B435	Remains left in place.				205	84.5	2.64	